

REMARKS

The office action of August 24, 2010, has been carefully considered.

It is noted that claims 1-5 are rejected under 35 U.S.C. 103(a) over JP 09-241790 alone or in view of the patent to Kato et al., and further in view of the patent to Hollander or the patent to Hinrichsen.

It is respectfully submitted that the claims presently on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references, applicant has attached hereto test data comparing compositions with different chromium contents. One composition has a Cr content of 0.273% (JP'790) and the other has a Cr content of 0.614% (present invention). The test data shows that the composition of the presently claimed invention does not result in the same properties as the composition of JP'790. For example, the chromium content of more than 0.30% provides an enhanced tensile strength and fracture elongation which would not be expected from or suggested by the compositions of JP'790. Thus,

as the test data demonstrates, one skilled in the art would not find the presently claimed invention obvious from the teachings of JP'790. Therefore, the upper limit of Cr in JP'790 does not render the present invention obvious to one skilled in the art.

Additionally, JP 790 does not teach adjusting the ferrite content within the matrix to be between 70 and 95%, with the remainder martensite. Applicant also questions whether JP 790 teaches a microstructure that is close to the dual-phase steel according to the present invention since JP 790 teaches using a different alloy and is silent regarding the two-stage controlled cooling within the limits defined in section a) of claim 1. Thus, applicant submits that JP 790 does not teach the presently claimed invention.

The patent to Hollander discloses a method and device for cooling hot-rolled metal strip on a run-out table after being rolled. The cooling device of Hollander has a number of successively disposed water nozzles. However, there is no teaching by Hollander concerning a two-stage cooling regime in a manner according to the presently claimed invention.

The patent to Hinrichsen discloses a strip temperature

control system that uses water sprays in a region of the run-out table between a hot strip finishing train and a coiler. There is no teaching concerning the performance of a two-stage cooling regime, nor is there any teaching concerning achieving a dual-phase microstructure in a hot rolled and cooled strip.

The Examiner combined these references in determining that claims 1-5 would be unpatentable over such a combination. Applicant respectfully submits that none of these references, either individually or in combination, teach a method and continuous casting and rolling installation for producing hot-rolled strip as in the presently claimed invention, in which the initial starting steel has a composition including greater than 0.3-1.2% Cr. The cited prior art is limited to 0.30% Cr.

In view of these considerations it is respectfully submitted that the rejection of claims 1-5 under 35 U.S.C. 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

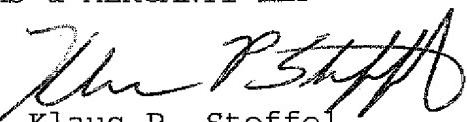
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Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademark Office Deposit Account No. 02-2275.

Respectfully submitted,

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By



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By: 
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Date: January 24, 2011